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Accidents.

Accident barometer. Prepared by the Statistical Bureau, National safety council. National safety news. v.44, no.1. July 1941. p.28-29. These items summarize monthly reports collected by National safety council to show current accident trends.

How to get hurt. By John Wessman. Iowa agriculturist. v.42, no.2. May 1941. p.6, 27.

Promote safety on the farm. Dakota farmer. v.61, no.11. June 14, 1941. p.255.

Agriculture.

Because tractors don't eat oats. By A. P. Brodell. Land policy review. v.4, no.8. August 1941. p.25-28. Gives meaning of surplus acres and why they now may be a vital asset.

Climate and man: yearbook of agriculture, 1941. Washington, U. S. Govt. print. off., 1941. 1248p. U. S. Department of Agriculture.

Costs and returns from farm enterprises. By Paul S. Williamson. Ithaca, N. Y., 1941. 41p. Cornell university. Agricultural experiment station. Bulletin no.756.

Directory of schools of agriculture in the Latin American republics. Washington, D. C., 1941. 28p. Mimeographed. U. S. office of education. Federal security agency.

Farmers and defense. By Claude R. Wickard. Washington, D. C., American council on public affairs, [n.d.]. 40p.

Types of farming in California analyzed by enterprises. By L. A. Crawford and Edgar B. Hurd. Berkeley, Calif., 1941. 128p. California. Agricultural experiment station. Bulletin no.654.

Waste on farms. By Major James Keith. Scottish journal of agriculture. v.23, no.3. July 1941. p.225-231.

Air Conditioning.

Comfort with summer air conditioning. By Thomas Chester, N. D. Adams, C. R. Ballamy, G. D. Fife, E. P. Heckel, Dr. W. J. McConnell, F. C. McIntosh, A. B. Newton, B. F. Raber and C. Tasker. Heating, piping and air conditioning. v.13, no.10. October 1941. p.649-654.

How to beat the heat. Popular mechanics. v.75, no.6. June 1941. p.82-85, 168.

Air Raid Protection.

Factors in aerial bombardment protection. By Harold E. Wessman and William A. Rose. Engineering news record. v.127, no.9. August 28, 1941. p.60-64. Static-load and energy methods of designing structural members to withstand bombing are reviewed. Methods of protection against fragmentation, blast, and suction are then considered, together with provisions for safety zones in existing buildings.

Structural problems in bomb protection. By Harold E. Wessman and Wm. A. Rose. Engineering news record. v.127, no.11. September 11, 1941. p.75-78. Authors discuss most suitable exterior wall construction for buildings to provide protection against bombs. Consideration is given to most favorable design of interior walls, partitions, floor systems and stairways. Problems of designing bomb-resistant shelters are reviewed, with study including sanitary, ventilation, and space requirements. Recommended practices for shelters are summarized in design of shelter for 1,200 persons.

All American Canal.

Placing the all-American canal in operation. By L. J. Foster. Civil engineering. v.11, no.10. October 1941. p.580-583.

Belts and Belting.

Know your belting and save power. By W. F. Schaphorst. Southern power & industry. v.59, no.11. November 1941. p.68-71.

Brooders.

Brooding-equipment tests and design. By P. R. Hoff and C. E. Lee. In fifty-third annual report of Cornell university of agricultural experiment station, 1940. Ithaca, N. Y., 1940. p.91.

Brooders. (Cont'd.)

Chick battery brooder designed for nutritional research. By H. J. Almquist and W. R. Smith. Poultry science. v.20, no.4. July 1941. p.337-338. Advantages: 1. Chick cages are entirely separate from each other. 2. There is no possibility of accidental transfer of food or water between cages or of contact between chicks in different cages. 3. Electrical heating system employs two 250 watt heating units giving a wide diffusion of heat. 4. Heating system is entirely outside of compartments. 5. All control and observation can be made from front of battery. 6. Solidly-closed back of battery, when placed toward light, permits only dim light inside compartments. 7. We have observed no chicks accidentally caught, injured, or killed as result of any feature of design of this battery. 8. Battery is easily disassembled and cleaned.

Brooders, Electric.

Engineering aspects of electric brooding in winter. By John E. Nicholas, E. W. Callenbach and R. R. Murphy. Agricultural engineering. v.22, no.10. October 1941. p.345-349.

Building Construction.

Construction, housing and real property, a survey of available basic statistical data. By Jean H. Williams. Washington, U. S. Govt. print. off., 1940. 169p. Processed. Executive office of the president. Bureau of the budget.

Construction joints. By Byram W. Steele. Transactions of American society of civil engineers. v.106. New York, 1941. p.1210-1339.

Effect of earthquakes on framed buildings. By Allen Joshua Ockleston. Journal of institution of civil engineers. v.16, no.5. March 1941. p.41-64.

Foundation stresses in an elastic solid with a rigid underlying boundary. By A. E. Cummings. Civil engineering. v.11, no.11. November 1941. p.665-667.

Foundations: just a few pointers to aid you in your fall building plans. By Ray D. Everson. Indiana farmers guide. v.97, no.14. July 26, 1941. p.20.

Joining mortars for brickwork. London, His Majesty's stationery office, 1941. 4p. Department of scientific and industrial research. Building research wartime building bulletin no.16.

Modular design. Architectural forum. v.75, no.1. July 1941. p.31-34. Modular masonry is at last available which permits coordination of brick, concrete block, and cast stone with wood framing, sheet materials, and stock wood windows on uniform 4 in. basis. Diagram shows corner in brick veneer wall in which window widths (2 ft. and double 2 ft. 10 in.) have been picked to coincide with regular 16 in. stud spaces and located accordingly, so that stud spacing and joints in sheet materials bear planned relationship to openings.

Building Construction. (Cont'd.)

Nailing dense hardwoods. Madison, Wis., 1941. 3p. U. S. Forest service. Forest products laboratory. Technical note no.247.

Preparation of foundations. By Charles H. Paul and Joseph Jacobs. Transactions of American society of civil engineers. v.106. New York, 1941. p.1154-1170. Emphasizes more important requirements and discusses briefly some general methods of treatment.

Simplified method for calculating deflections of beams. By Edward Saibel. Civil engineering. v.11, no.11. November, 1941. p.669-670.

Theory of elastic stability applied to structural design. By Leon S. Moisseiff and Frederick Lienhard. Transactions of American societ of civil engineers. v.106. New York, 1941. p.1052-1112 Theory of elastic stability is study of fundamental laws that govern behavior of metals in compression and application of knowledge derived from such study to design of structures. Comprehensive understanding of this behavior will enable engineering profession to establish rules of design in accordance with fundamental laws and thereby to construct more dependable as well as more economical structures. Greater freedom in application of metals will result therefrom. Elements and shapes in which metals are used for structural members have been studied and tested individually, as well as in combined forms. Tests of members subjected to compression have shown that member as whole will fail by flexure as column, or its component parts will eventually wrinkle into waves. Stress at which these waves become visible depends on material, proportions of elements, and structural composition of member. Elements that have wrinkled into visible waves can no longer sustain their proportionate share of load and small increase will cause failure.

Wind stress analysis by the K-percentage method. By F. P. Witmer. American society of civil engineers. Proceedings. v.67, no.6. June 1941. p.961-974. Purpose in preparing paper was twofold: (1) To describe in detail procedure for applying K-percentage method of wind stress analysis which was presented in 1939, in order to facilitate its practical utilization; and (2) To present method of design, using aforementioned principles, but with assumption that vertical wind reactions and direct wind stresses in columns must be in accordance with cantilever relation, thus eliminating all secondary moments due to change in length of columns under their direct wind stresses.

Wind stress analysis by the K-percentage method: discussion. By C. M. Goodrich. American society of civil engineers. Proceedings. v.67, no.7. September 1941. p.1389-1390.

Wind stress analysis by the K-percentage method: discussion. By Messrs. Francis L. Castleman, Jr. and Clyde T. Morris. American society of civil engineers. Proceedings. v.67, no.8. October 1941. p.1562-1566.

Building Materials.

Burning tests of common plastics. By A. J. Perkins. Quarterly of national fire protection association. v.35, no.2. October 1941. p.131-135. Methods of test. Discussion of results.

Concrete control. By I. L. Tyler. Transactions of American society of civil engineers. v.106. New York, 1941. p.1193-1209. Paper is attempt to describe present state of progress in concrete manufacture and control as applied to construction of dams, with some mention of factors that may be of importance to future developments.

Concrete in sea water: a revised viewpoint needed: Discussion. By Messrs. E. C. Jack and Alfred M. Freudenthal. American society of civil engineers. Proceedings. v.67, no.8. October 1941. p.1456-1460.

Construction materials research and tests. Engineering news record. v.127, no.3. July 17, 1941. p.51-53. Brick durability. Creosoted laminated beams. Performance of greases. Tests of structural alloys. How fatigue values vary. Shrinkage vs. plastic flow. Test cylinder capping. Air content of concrete. Limes and lime-mortars.

Mud plus asphalt makes a waterproof home. Popular mechanics. v.76, no.4. October 1941. p.33.

Properties and performance of fiber tile boards. By Daniel A. Jessup, Herman Bogaty and Samuel G. Weissberg. Washington, U. S. Govt. print. off., 1941. 6p. National bureau of standards. Building materials and structures. Report BMS77.

Synthetic-resin cements for wood. Messrs. British industrial plastics, limited, London. Engineering. v.151, no.3924. March 28, 1941. p.246-247.

Chemistry, Technical.

Chemurgic miracles. By J. E. Stanford. Southern agriculturist. v.71, no.9. September 1941. p.6. New uses for old crops and old uses for new crops by converting them into useful industrial products.

Conservation.

Contributions of soil and water conservation to the progress of southern agriculture. By Arvey Carnes. In 42nd annual convention of association of southern agricultural workers. Proceedings. p.77-78. Raleigh, N. C., Capital printing co., 1941.

Graduate studies pertaining to soil and water conservation. In progress report, 1939-1940: research and investigational activities in agricultural engineering. Blacksburg, Va., 1940. p.20-22. Bulletin of the Virginia Polytechnic institute. v.34, no.3.

Conservation. (Cont'd.)

Soil and water conservation investigations: Progress report of the Navajo soil and water conservation experiment station, Mexico Springs, New Mexico, 1934-1939. By D. S. Hubbell, J. L. Gardner and G. L. Sherman. Washington, D. C., 1941. 52p. Mimeographed. U. S. Department of agriculture. Soil conservation service.

Soil conservation and food supplies. Pt. 1. By G. V. Jacks. Country life. v.89, no.2318. June 21, 1941. p.536-57 Points out that as one food-exporting country after another revolutionises its husbandry in order to preserve its fertility---produce availabl for European markets will dwindle, and consequently that importing countries will have to grow more in order to live. Shows clearly importance of taking long view of our own agricultural problems and how vital it is to see them against background of world conditions.

Stabilizing western economy by water conservation. By Wesley R. Nelson Reclamation era. v.31, no.10. October 1941. p.258-262

Corrosion.

Atmospheric exposure of wire and fencing. By H. P. Smith and M. H. Byrom. In fifty-third annual report of the Texas agricultural experiment station, 1940. College Station, Tex., 1941. p.122

Cotton Gins and Ginning.

The work of the United States cotton ginning laboratory. Washington, U. S. Govt. print. off., 1941. 28p. U. S. Department of Agriculture. Miscellaneous publication no.445.

Crops (Drying).

Sliced hay---air cooled. By Everett Sandahl. Iowa agriculturist v.42, no.2. May 1941. p.7, 26.

Dams.

Basic design assumptions. By Ivan E. Houk and Kenneth B. Keener. Transactions of American society of civil engineers. v.106. New York, 1941. p.1115-1130. Basic assumptions and related technical considerations involved in design of high and important masonr dams of single-arch, curved gravity, and straight gravity types, built on rock foundations, are presented. Some of statements are applicable to design of other types of masonry dams. However, this paper does not attempt to cover comprehensively fundamental criteria involved in desig of multiple-arch dams, reinforced-concrete slab and buttress dams, roun head buttress dams, or other special types of masonry dams. Paper is confined, primarily, to basic assumptions which have either undergone appreciable modifications during recent years or have been developed as entirely new criteria for design of important masonry dams of aforementioned types. Basic information, such as normal streamflow conditio at site, magnitudes of ice pressure, maximum range of seasonal concrete

temperature changes, physical properties of concrete materials, and other data which may be intelligently ascertained or predicted from readily available records, or may be determined by routine laboratory measurements, are not discussed. Assumptions involved in determining maximum anticipated flood intensities for use in designing spillway features constitute special problem and consequently are not included. Basic assumptions for design of masonry dams are treated from viewpoints of dam site, dam, load conditions, structural action, stability factors, and stress conditions. Details of procedures involved in dam design are not included. Bibliography at end of paper lists more important recent articles which should be consulted.

Completion of Crooked Creek dam. By Robert M. Morris. Military engineer. v.33, no.193. November 1941. p.524-525.

Design of arch dams. By R. S. Lieurance. Transactions of American society of civil engineers. v.106. New York, 1941. p.1131-1153. Purpose of paper is to present comprehensive series of tables to facilitate computation of forces, moments, and radial deflections in design of arch dams. Seven basic load conditions are provided for, and text comprises brief discussion of design problems involved.

Geological problems of dams. By Irving B. Crosby. Transactions of American society of civil engineers. v.106. New York, 1941. p.1171-1192. Paper is confined to consideration of geological and foundation problems of masonry dams founded upon rock.

Masonry dams: A symposium. Transactions of American society of civil engineers. v.106. New York, 1941. p.1113-1339. Paper no.2121. Basic design assumptions, by Ivan E. Houk and Kenneth B. Keener. Design of arch dams, by R. S. Lieurance. Preparation of foundations, by Charles H. Paul and Joseph Jacobs. Geological problems of dams, by Irving B. Crosby. Concrete control, by I. L. Tyler. Construction joints, by Byram W. Steele.

Pioneer dam replaced in Utah. By Donald Jerman. Utah farmer. v.61, no.7. November 10, 1941. p.6.

Defense.

National defense bulletins. Series F: Guide to current material. Library of Congress. Legislative reference service. Washington, D. C., 1941. Parts 1-41. Mimeographed.

Reference list of national defense publications. Compiled by U. S. information service, office of government reports and executive office of the President. Washington, D. C., 1941. 35p. Mimeographed.

Drainage.

Land drainage (Scotland) Act, 1941. Scottish journal of agriculture. v.23, no.3. July 1941. p.272-275.

Dryers and Drying.

Drying comes to the aid of defense. Rural electrification news. v.7, no.2. October 1941. p.12.

Electricity - Distribution.

Safety rules for the installation and maintenance of electric supply and communication lines. Washington, U. S. Govt. print. off., 1941. 177p. U. S. department of commerce. National bureau of standards handbook H32.

Electricity in the Home.

Low cost electrified home. By Henry J. Morton. Edison electric institute bulletin. v.9, no.7. July 1941. p.299, 301-302.

Electricity on the Farm.

Building electrical equipment for the farm. By W. A. Ross, W. P. Beard Jay Deiss, Lee C. Prickett. Washington, U. S. Govt. print. off., 1941. 97p. U. S. office of education. Federal security agency. Vocation division bulletin no.209. Agricultural series no.54.

Electric power comes to the farm. By Louise McCue. Arkansas farmer. v.43, no.11. November 1941. p.6-7.

Further studies of electricity in sweet potato plant production. By J. B. Edmond and G. H. Dunkelberg. In fifty-third annual repo of the South Carolina experiment station. Clemson, S. C., 1940. p.43-47.

Legislative advances in rural electrification---1941. Rural electrifi cation news. v.7, no.2. October 1941. p.22-24. Enabling laws. Amendatory legislation. Tax legislation.

Rural electric service. Address by James P. Pope, Director, Tennessee valley authority, at annual meeting of North Georgia electric membershi corporation, Dalton, Ga., August 1, 1940. Knoxville, Tenn., 1940. 6p. Mimeographed. Tennessee valley authority.

Rural electrification in the United States. By Royden Stewart. Edison electric institute bulletin. v.9, no.10. October 19 p.409-415. Part II---national development, 1924-1935; the C.E.E.A

Some uses of electricity by the dairy industry. By Dr. R. P. Gingeric Rural electrification exchange. v.4, no.3. Third quarter. 1941. p.52-54, 64. Electric steam accumulator. Dairy b n illumination. Irradiating milk for vitamin D. Ultra-violet inhibits bacteria.

Twenty-five years of rural electrification. By Roy E. Hayman. Rural electrification exchange. v.4, no.3. Third quarter, 1941. p.49-51, 61.

Electricity on the Farm. (Cont'd.)

Use of electricity in curing and storing sweet potatoes. By J. B. Edmond and G. H. Dunkelberg. In fifty-third annual report of the South Carolina experiment station. Clemson, S. C., 1940. p.39-42.

Erosion Control.

Tooling up for soil conservation. By Harry L. Carr and G. E. Ryerson. Soil conservation. v.7, no.5. November 1941. p.113-116, 126.

Evaporation.

Evaporation and transpiration. By C. W. Thornthwaite and Benjamin Holzman. In Climate and man; 1941 yearbook of agriculture. Washington, U. S. Govt. print. off., 1941. p.545-550. Need for methods of measuring evaporation and transpiration. New technique for measuring moisture losses. Results of experimental measurements. Relation to flood hazard.

Farm Buildings.

Balancing farm structures with farm capabilities. By John A. Slipher. Agricultural engineering. v.22, no.9. September 1941. p.311-312.

Farm buildings---tombstones or tools. By D. Howard Doane. Agricultural engineering. v.22, no.9. September 1941. p.313-315.

Modern farm buildings. Kansas City, Missouri, Dierks lumber & coal company, [1941]. 63p.

More basic research in farm buildings needed: Letter from D. H. Malcom. Agricultural engineering. v.22, no.10. October 1941. p.340.

Straw sheds. By S. B. Cleland. University Farm, St. Paul, Minn., 1941. 7p. Minnesota. Agricultural extension service. Extension bulletin no.227.

Turpentine still buildings and equipment. Naval stores research division. Bureau of agricultural chemistry and engineering. Washington, U. S. Govt. print. off., 1940. 44p. U. S. Department of agriculture. Miscellaneous publication no.387.

Farm Machinery and Equipment.

Construction of liquid manure distributor. By C. R. Taylor. New Zealand journal of agriculture. v.62, no.6. June 16, 1941. p.435, 437. Gives constructional details.

Farm Machinery and Equipment. (Cont'd.)

Corn-picker adjustments. By Carlton Stoddard. Successful farming. v.39, no.10. October 1941. p.18, 44-45.

Handling grain with power. By H. H. Musselman. Michigan farmer. v.197, no.13. June 21, 1941. p.413, 416.

Labor requirement and cost of growing corn with machinery and native implements. By Alejandro B. Catambay and Higino R. Marquez. The Philippine agriculturist. v.30, no.3. August 1941. p.227-238.

Machinery repair necessary now. By E. L. Barger. Arkansas farmer. v.43, no.11. November 1941. p.7.
Farmers urged to take care of equipment. Replacement likely to be slow during emergency.

Making over a horse-drawn mower for tractor operation. By Ralph Frevik. Dakota farmer. v.61, no.18. September 20, 19 p.389.

Rubber-tired farm wagons. In report of Michigan agricultural experimen station for the two years ended June 30, 1940. East Lansing, Mich 1940. p.5.

Farmhouses.

Architectured homes for American farms. By A. Clark Hudson. Agricultural engineering. v.22, no.10. October 1941. p.344, 349.

How to obtain adequate farm housing with limited income. By Deane G. Carter. Agricultural engineering. v.22, no.9. September 1941. p.309-310.

Minimum requirements for farmhouses. Washington, U. S. Govt. print. off., 1941. 8p. U. S. Department of agriculture. Miscellaneous publication no.475.

Feed Grinders and Grinding.

Grinding feed at lower cost. The farmer. v.59, no.18. September 6, 1941. p.12.

Feeding and Feeding Stuffs.

Loss of carotene in machine-dried alfalfa meal under variable conditions of storage. By O.H.M. Wilder and R. M. Bethke. Poultry science. v.20, no.4. July 1941. p.304-312.

Fence Posts.

Creosoted tamarisk fence posts and adaptability of tamarisk as a fine cabinet wood. By G.E.P. Smith. Tuscon, Ariz., 1941. 223-254p. Arizona. Agricultural experiment station. Technical bulletin no.92.

Treating fence posts on the farm. By C. N. Whitney. Montana farmer. v.28, no.26. September 15, 1941. p.5. Hot dipping in creosote, followed by cold treatment prolongs life of posts to 25 years or more at cost of 11 to 15 cents per post.

Fences, Electric.

Electric fences. By W. L. Parham. Agricultural journal. v.12, no.3. September 1941. p.83-85.

Fertilizer Placement.

Efficiency in distribution and placement of cottonseed and fertilizer. By H. P. Smith and M. H. Byrom. In fifty-second annual report of the Texas agricultural experiment station, 1939. College Station, Tex., 1940. p.123-124.

Efficiency in distribution and placement of cottonseed and fertilizer. By H. P. Smith and M. H. Byrom. In fifty-third annual report of the Texas agricultural experiment station, 1940. College Station, Tex., 1941. p.121-122.

Fertilizers.

TVA fertilizer processes. Knoxville, Tenn., 1940. 5p. Tennessee valley authority.

Utilization of barnyard manure for Washington soils. By L. E. Dunn and L. C. Wheeting. Pullman, Wash., 1941. 20p. Washington. Agricultural experiment station. Bulletin no.395.

Fire Protection.

Farm fires prevented. Wisconsin agriculturist and farmer. v.68, no.20. October 4, 1941. p.30-31. What causes farm fires. Fires from chimneys and defective heating apparatus. Fires from combustible roofs. Provide all buildings with proper lightning protection equipment. Spontaneous ignition. Matches and smoking. Fires from electricity. Gasoline and kerosene. Fire protection. For the rural community.

Fighting power-plant fires...I. Power. v.85, no.11. November 1941. p.804-805. Review of simple things about fire fighting.

National defense fires. Boston, Mass., National fire protection association, 1941. 20p.

Fire Protection. (Cont'd.)

Preventing farm fires. Utah farmer. v.61, no.5. October 10, 1941. p.21. What to do to prevent farm fires.

So you're afraid of fire? By J. H. Hawkins. Successful farming. v.39, no.10. October 1941. p.22, 60-61.

Fireplaces.

Easy ways to cure smoky fireplaces. By R. M. Cooley. Popular mechanics. v.76, no.5. November 1941. p.115-117.

Garden fireplaces. Popular mechanics. v.75, no.6. June 1941. p.114-115.

Floods and Flood Control.

Construction for flood control at Pittsburgh. By Wilfred Bauknight. Civil engineering. v.11, no.11. November 1941. p.637-640.

Flood control on the Connecticut. Engineering news record. v.127, no.3. July 17, 1941. p.46-50. Current plans for flood control in Connecticut river basin are outlined and location of reservoirs and local protection works under construction or projected is given. Also given are methods used in selecting reservoir sites, balancing reservoir costs against cost of protective works along river and determining economic benefits of protection afforded.

Flood forecasting. By Merrill Bernard. In Climate and man; 1941 yearbook of agriculture. Washington, U. S. Govt. print. off., 1941. p.565-576. Causes and results of floods. Problem of flood forecasting. Flood-forecasting service and how it operates. Community responsibility in flood preparedness.

Maximum probable floods on Pennsylvania streams. By Charles F. Ruff. Transactions of American society of civil engineers. v.106. New York, 1941. p.1453-1519. Paper no.2126.

Storms and floods. By Benjamin Holzman and Albert Showalter. In Climate and man; 1941 yearbook of agriculture. Washington, U. S. Govt. print. off., 1941. p.551-557. Thunderstorms and flash floods. Persistent rain and general floods.

Transient flood peaks. By Henry B. Lynch. In Transactions of American society of civil engineers. v.106. New York, 1941. p.199-269. Paper no.2103. Floods of so-called "cloudburst" type yield momentary runoff peaks entirely out of proportion to rate of rainfall. They are caused by an abrupt increase in rainfall and runoff. Their magnitude is controlled by many factors, of which probably most important are rate of increase and intensity of rainfall.

Flow of Heat.

The transmission of heat through textile fabrics, V. By W. Howard Rees. Didsbury, British cotton industry research association, Shirley institute, 1941. 51-68p. Reprinted from Shirley institute memoirs. v.18, 1941. Discussion of granaries and their construction.

Flow of Water.

Effects of rifling on four-inch pipe transporting solids. By G. W. Howard. Transactions of American society of civil engineers. v.106. New York, 1941. p.135-157. Paper no.2101. Tests to determine effects of rifling installed in 4-in. pipe upon transportation of mixtures of water and material are described. Results were compared with those from 2-in. pipe in effort to discover any similarity between transportation characteristics of each pipe such that principle of these smaller pipes could be applied to larger pipe. Tests for development of optimum design of rifling for pipes in which sand was transported material constituted major part of testing program. Rifling was tested later with silt, clay, and pea gravel used as transported materials. Attempt is made to show that results obtained through study of 2-in. and 4-in. pipe can be extended to include pipes having larger diameter; and further, that under certain conditions, dredging technique of present day can be improved considerably by proper use of rifling in discharge line.

Factors affecting the decreasing rate of flow of liquids through wood. By Bror Ernest Anderson, Ross Aiken Gortner and Henry Schmitz. University Farm, St. Paul, Minn., 1941. 70p. Minnesota. Agricultural experiment station. Technical bulletin no.146.

Measuring Ohio's rivers: stream flow during the 1940 climatic year. By Vernon Youngquist. Ohio. Engineering experiment station news. v.12, no.5. Columbus, Ohio, 1940. p.15-16.

Ohio stream flow. Minimum flow contingencies - Lake Erie basin. By C. V. Youngquist. Engineering experiment station news. Ohio state university. v.12, no.4. October, 1940. p.25-26.

Stream flow records of Pennsylvania, for the year October 1, 1939 to September 30, 1940. Harrisburg, Pa., 1940. 207p. Commonwealth of Pennsylvania. Department of forests and waters. Division of hydrography.

Turbulent flow of sludges in pipes. By Harold E. Babbitt and David H. Caldwell. Urbana, Ill., 1940. 41p. University of Illinois. Engineering experiment station. Bulletin series no.323.

Foods, Frozen.

Design for frozen egg plant. By A. E. M. Modern refrigeration. v.44, no.520. July 1941. p.100-101.

Granaries.

Design of flour mills, granaries, warehouses, and silos. By Oscar Faber. Journal of institute of civil engineers. v.16, no.6. April 1941. p.169-182.

Economical plans for corn cribs and granaries. American lumberman. No. 3210. August 9, 1941. p.27-28.

No roof over grain: no loan. The farmer. v.59, no.12. June 14, 1941. p.5.

Unlimited emergency! By H. J. Barre and Henry Giese. Successful farming. v.39, no.10. October 1941. p.16-17, 38-39. Basic points for good corncrib.

Heating.

Analysis of factors influencing building heat losses. By Paul D. Close. Heating, piping and air conditioning. v.13, no.9. September 1941. p.599-604. Transmission losses. Infiltration losses. Practical application of data. Summary, conclusions and recommendations.

Construction details for radiant heating and cooling. By T. Napier Adlam. Heating, piping and air conditioning. v.13, no.7. July 1941. p.431-433.

Heating and ventilation of the home. By C.-E. A. Winslow. In Housing for health. Science press printing co., Lancaster, Pa., 1941. p.90-102.

Radiant heating by convection. By Richard Brindley and Alvin Ottum. Heating and ventilating. v.38, no.7. July 1941. p.41-43. Basic idea. Test installation. Discussion.

Why panel heating? By F. W. Hutchinson. Heating, piping and air conditioning. v.13, no.10. October 1941. p.620-62 Reviews some of intangible factors which influence selection of given type of heating system and shows from psychrometrics, and by reference to current ideas regarding "freshness" of air in enclosure, background for some of claims which have been advanced for panel heating.

Hops.

Domestic hop industry: its progress toward the improvement of American hops. By L. M. Richardson. Brewers digest. v.16, no.11. October 1941. p.37-39.

Houses.

Home of their dreams. By Bess M. Rowe. The farmer. v.59, no.19. September 20, 1941. p.5.

Houses. (Cont'd.)

Low cost homes. American home. v.26, no.6. November 1941. p.12-17.

Prefabrication progress; portable unit, $950; a demountable unit, $1500. Architectural forum. v.75, no.3. September 1941. p.208-209.

Hydraulics.

Hydraulics of water in unsaturated soil. By L. A. Richards. Agricultural engineering. v.22, no.9. September 1941. p.325-326.

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